

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/292,723

DATE: 04/28/1999

TIME: 09:47:10

Input Set: I292723.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

*see
P. 5***ENTERED**

1 <110> APPLICANT: Cedars-Sinai Medical Center
2 Readhead, Carol W.
3 Winston, Robert
4 Koeffler, H. Phillip
5 Muller, Carsten
6 <120> TITLE OF INVENTION: Transfection, Storage and Transfer of
7 Male Germ Cells for Generation of Selectable Transgenic Stem
8 Cells
9 <130> FILE REFERENCE: P07 41795
10 <140> CURRENT APPLICATION NUMBER: US/09/292,723
11 <141> CURRENT FILING DATE: 1999-04-15
12 <150> EARLIER APPLICATION NUMBER: US 09/191,920
13 <151> EARLIER FILING DATE: 1998-11-13
14 <150> EARLIER APPLICATION NUMBER: US 60/065,825
15 <151> EARLIER FILING DATE: 1997-11-14
16 <150> EARLIER APPLICATION NUMBER: US 09/272,443
17 <151> EARLIER FILING DATE: 1999-03-19
18 <150> EARLIER APPLICATION NUMBER: PCT/US98/24238
19 <151> EARLIER FILING DATE: 1998-11-13
20 <160> NUMBER OF SEQ ID NOS: 32
21 <170> SOFTWARE: FastSEQ for Windows Version 3.0
22 <210> SEQ ID NO 1
23 <211> LENGTH: 1958
24 <212> TYPE: DNA
25 <213> ORGANISM: HUMAN
26 <400> SEQUENCE: 1
27 tcgatctgat ttagagattt agggatggat gttttaaaaa aagcaaaagt agtaacagac 60
28 tatagcattg gtaatgtgtg tgtgcatata tacatattat ttttaaaaaa ataaagtctg 120
29 attatttcac ctggcttgtc agtcacctat gcaggcgtct gagcccccg gtttccagga 180
30 gccccccgta taaggacccc agggactcct ctccccacgc ggccggggccg cccgcccggc 240
31 cccagccccg gagagctgcc accgaccccc tcaacgtccc aagccccagc tctgtcgcgc 300
32 gcgttccttc ctcttcctgg gccacaatct tggctttccc gggccggctt cacgcagttg 360
33 cgcaggagcc cgcgggggaa gacctctcgt ggggacctcg agcacgacgt gcgaccctaa 420
34 atccccacat ctctctcgcg gcctcgcagg ccacatgcac cgggagccgg gcggggcagg 480
35 cgcggcccg caggaccccc gcgatggaga cgcaacactg ccgcgactgc acttggggca 540
36 gccccgcgcg gtcccagccg cctcccggca ggaagcgtag gtgtgtgagc cgaccgggag 600
37 cgagccgcgc cctcgggcca gcgtgggcag ggcgcgcag cctgcgcagc cccgaggacc 660
38 ccgcgtcgtc ctcccagacc agggttctca ggagcgggcc gcgcaggaga cgttagaggg 720
39 ggttggttag ggctgttggg agaacgggtc acggaaacag tcccttccaa agccggggcc 780
40 atcgtggggt gggcgagtcg gccctcccag gccgggggag cggaccagag gggacgtgtg 840
41 cagacggccg cggtcagccc cacctcgccc gggcggagac gcacagctgg agctggaggg 900
42 ccgtcgcgcg ttgggccctc aggggcctga acgcccaggg gtcgcggcga gtccacccgg 960
43 agcgagtcag gtgagcaggt cgccatggcg atgcggcccc ggagagcgca cgctgccgc 1020
44 ggtcggcatg gaaacgctcc cgctaggtcc gggggcgccg ctgattggcc gattcaacag 1080

PAGE: 2

RAW SEQUENCE LISTING PATENT APPLICATION US/09/292,723

DATE: 04/28/1999
TIME: 09:47:10

Input Set: I292723.RAW

```

45      acgcggttg  gcagctcagc  cgcacgccta  agcccgccgc  cctcccaggc  tggaaatccct  1140
46      cgacacttgg  tccttcccgc  ccgcaccttc  cgtgccctgc  ccttccctgc  ccttcccgcg  1200
47      cctgccccgc  ccggccccgc  ccggccctgc  ccaacctgc  ccgcacctgc  ccgccccagc  1260
48      cggccacctc  ttaaccgcga  tcctccagtg  cacttgccag  ttgttccgga  cacatagaaa  1320
49      gataacgacg  ggaagacggg  gccccgtttg  ggggtccaggc  aggttttggg  gcctcctgtc  1380
50      tgggtgggagg  aggcgcgagc  gcagcaccct  gctcgtcact  tgggatggag  accggctttc  1440
51      ccgcaatcat  gtacctgga  tcttttattg  ggggctgggg  agaagagtat  ctgagctggg  1500
52      aaggaccggg  gctcccagat  ttcttcttcc  aggtaacgtg  ggtttagtat  ccgacttgg  1560
53      aggcttgtca  gaatgtttct  ctcttccag  cccaacacga  agtcttggga  taaaaagcct  1620
54      ccctcagggg  ttcaaataac  tgttttgatt  cagagcaact  ttgatcgct  gtgcggtcgc  1680
55      acctgccctt  tcagcccaa  taattactgg  gaagatcagc  aattgggtgt  agtccattg  1740
56      cttggtgtc  tcctcctag  aggttcgctg  tgtccttga  gcccggggtg  gacggaatcg  1800
57      actaacagc  ttgtctgtt  ctcttccct  ggtagcagca  gccgtggag  tctgaagcaa  1860
58      tgcactgcag  caacccaa  agtggagttg  tgcgtgctac  agtggccga  ggtccgatg  1920
59      cttgtcagat  actcaccaga  gccccgtgg  gccaggat  1958
60      <210> SEQ ID NO 2
61      <211> LENGTH: 1442
62      <212> TYPE: DNA
63      <213> ORGANISM: HUMAN
64      <220> FEATURE:
65      <221> NAME/KEY: promoter
66      <222> LOCATION: (1) ... (1442)
67      <221> NAME/KEY: mutation
68      <222> LOCATION: (1427) ... (1427)
69      <400> SEQUENCE: 2
70      tcgatctgat  ttagagattt  agggatggat  gttttaaaaa  aagcaaaagt  agtaacagac  60
71      tatagcattg  gtaatgtgtg  tgtgcatata  tacatattat  ttttaaaaaa  ataaagtctg  120
72      attatttcac  ctggcttgtc  agtcacctat  gcaggcgtct  gagcccccg  gtttccagga  180
73      gcccccgta  taaggacccc  agggactcct  ctccccacgc  ggccggggcc  ccgccccgc  240
74      cccagcccg  gagagctgcc  accgacccc  tcaacgtccc  aagccccagc  tctgtcgccc  300
75      gcgttccttc  ctcttcctgg  gccacaatct  tggctttccc  gggccggctt  cacgcagttg  360
76      cgcaggagcc  cgcgggggaa  gacctctcgt  ggggacctcg  agcacgacgt  gcgaccctaa  420
77      atccccacat  ctctctgcc  gcctcgagc  ccacatgcac  cgggagccgg  gcggggcagg  480
78      cgcggccgc  aaggaccccc  gcgatggaga  cgcaacactg  ccgcgactgc  acttggggca  540
79      gcccccgcc  gtcccagccg  cctcccgca  ggaagcgtag  gtgtgtgagc  cgacccggag  600
80      cgagccgc  cctcgggcca  gcgtgggcag  ggccgcgcag  cctgcgcagc  ccgaggacc  660
81      ccgcgtcgt  ctcccagcc  aggtttctca  ggagcgggcc  gcgcaggaga  cgttagaggg  720
82      ggttgtagc  ggctgttggg  agaacgggtc  acggaaacag  tcccttccaa  agccggggcc  780
83      atcgtgggt  gggcgagtcc  gccctccag  gccgggggcg  cggaccagag  gggacgtgtg  840
84      cagacggccg  cggtcagccc  cacctcgccc  gggcgagac  gcacagctgg  agctggaggg  900
85      ccgtcgcccg  ttgggccctc  aggggcctga  acgccaggg  gtcgcggcga  gtccaccggg  960
86      agcgagttag  gtgagcaggt  cgccatggcg  atgcggcccc  ggagagcgca  cgctgccgc  1020
87      ggtcgcatg  gaaacgctcc  cgctaggtcc  gggggcgccg  ctgattggcc  gattcaacag  1080
88      acgcgggtg  gcagctcagc  cgcacgccta  agcccgccg  cctcccaggc  tggaaatccct  1140
89      cgacacttgg  tccttcccgc  ccgcaccttc  cgtgccctgc  ccttccctgc  ccttcccgcg  1200
90      cctgccccgc  ccggccccgc  ccggccctgc  ccaacctgc  ccgcacctgc  ccgccccagc  1260
91      cggccacctc  ttaaccgcga  tcctccagtg  cacttgccag  ttgttccgga  cacatagaaa  1320
92      gataacgacg  ggaagacggg  gccccgtttg  ggggtccaggc  aggttttggg  gcctcctgtc  1380
93      tgggtgggagg  aggcgcgagc  gcagcaccct  gctcgtcact  tgggatggag  accggctttc  1440
94      cc  1442

```

PAGE: 3

RAW SEQUENCE LISTING PATENT APPLICATION US/09/292,723

DATE: 04/28/1999

TIME: 09:47:10

Input Set: I292723.RAW

```

95 <210> SEQ ID NO 3
96 <211> LENGTH: 1294
97 <212> TYPE: DNA
98 <213> ORGANISM: HUMAN
99 <220> FEATURE:
100 <221> NAME/KEY: promoter
101 <222> LOCATION: (1)...(1294)
102 <221> NAME/KEY: mutation
103 <222> LOCATION: (1279)...(1279)
104 <400> SEQUENCE: 3
105      atgcaggcgt ctgagccccc gggtttccag gagccccccg tataaggacc ccagggactc      60
106      ctctccccac gcggccgggc cgcccgcccg gccccagcc cgagagactg ccaccgacct      120
107      cctcaacgtc ccaagcccca gctctgtcgc ccgcgttcc tctcttccct gggccacaat      180
108      cttggctttc ccgggccggc ttcacgcagt tgcgcaggag ccgcggggg aagacctctc      240
109      gtggggacct cgagcacgac gtgcgacct aaatccccac atctcctctg ccgcctcgca      300
110      ggccacatgc accgggagcc gggcggggca ggcgggccc gcaaggacct ccgcgatgga      360
111      gacgcaacac tgccgcgact gcacttgggg cagccccgcc gcgtcccagc cgctcccgg      420
112      caggaagcgt aggtgtgtga gccgacctgg agcgagccgc gccctcgggc cagcgtgggc      480
113      agggcgccgc agcctgcgca gccccgagga cccgcgtcg ctctcccag ccagggttct      540
114      caggagcggg ccgcgcagga gacgttagag ggggttggtt gggctgttg ggagaacggg      600
115      tcacggaaac agtcccttcc aaagccgggg ccatcgtggg gtgggcgagt ccgccctccc      660
116      aggccggggg cgcgaccag aggggacgtg tgcagacggc cgcggtcagc cccacctcgc      720
117      ccgggcggag acgcacagct ggagctggag ggccgtcgcc cgttggggcc tcaggggcct      780
118      gaacgcccag gggtcgcggc ggtccacccc ggagcgagtc aggtgagcag gtcgccatgg      840
119      cgatgcggcc ccggagagcg cacgcctgcc gcggtcggca tggaaacgct cccgctaggt      900
120      ccggggggcg cgctgattgg ccgattcaac agacgcgggt gggcagctca gccgcacgc      960
121      taagcccggc cgctcccag gctggaatcc ctcgacactt ggtccttccc gccccgccct      1020
122      tccgtgccct gcccttccct gcccttcccc gccctgcccc gccggccccg gcccgccct      1080
123      gcccaccctt gccccgccct gccccgccc gcccggccac tcttaaccgc gatcctccag      1140
124      tgcacttgcc agttgttccg gacacataga aagataacga cgggaagacg gggccccgtt      1200
125      tgggggtccag gcagggtttg gggcctcctg tctggtggga ggaggccgca gcgcagcacc      1260
126      ctgctcgtca cttgggattg agaccggctt tccc                                1294
127 <210> SEQ ID NO 4
128 <211> LENGTH: 597
129 <212> TYPE: DNA
130 <213> ORGANISM: HUMAN
131 <220> FEATURE:
132 <221> NAME/KEY: promoter
133 <222> LOCATION: (1)...(597)
134 <221> NAME/KEY: mutation
135 <222> LOCATION: (582)...(582)
136 <400> SEQUENCE: 4
137      ggccgcggtc agccccacct cgcccgggcg gagacgcaca gctggagctg gagggccgtc      60
138      gcccggtggg ccctcagggg cctgaacgcc caggggtcgc ggcgagtcca cccggagcga      120
139      gtcaggtgag caggtcgcca tggcgatgcg gccccggaga gcgcacgcct gccgcggtcg      180
140      gcatggaaac gctcccgtca ggtccggggg cgccgctgat tggccgattc aacagacgcg      240
141      ggtgggcagc tcagccgcat cgctaagccc ggccgcctcc caggctggaa tccctcgaca      300
142      cttggtcctt ccgcgccgcg ccttccgtgc cctgcccttc cctgcccttc cccgccctgc      360
143      cccgccccgc ccggccccgc cctgcccac cctgccccgc cctgccccgc ccagccggcc      420
144      acctcttaac cgcgatcctc cagtgcactt gccagttggt ccggacacat agaaagataa      480

```

PAGE: 4

RAW SEQUENCE LISTING PATENT APPLICATION US/09/292,723

DATE: 04/28/1999
TIME: 09:47:10

Input Set: I292723.RAW

```

145      cgacgggaag acggggcccc gtttggggtc caggcaggtt ttggggcctc ctgtctgggtg      540
146      ggaggaggcc gcagcgcagc accctgctcg tcacttggga ttgagaccgg ctttccc      597
147      <210> SEQ ID NO 5
148      <211> LENGTH: 469
149      <212> TYPE: DNA
150      <213> ORGANISM: HUMAN
151      <220> FEATURE:
152      <221> NAME/KEY: promoter
153      <222> LOCATION: (1)...(469)
154      <221> NAME/KEY: mutation
155      <222> LOCATION: (454)...(454)
156      <400> SEQUENCE: 5
157      agcaggtcgc catggcgcgtg cggccccgga gagcgcacgc ctgccgcggt cggcatggaa      60
158      acgtccccgc taggtccggg ggccgcgctg attggccgat tcaacagacg cgggtgggca      120
159      gtcagccgc atcgctaagc ccggccgcct cccaggtcgg aatccctcga cacttggtcc      180
160      tccccgcccc gcccttccgt gccctgccct tccctgccct tccccgccct gccccgcccg      240
161      gccccgcccc gccctgccca accctgcccc gccctgcccc gccagccgg ccacctctta      300
162      accgcgatcc tccagtgcac ttgccagttg ttccggacac atagaaagat aacgacggga      360
163      agacggggcc ccgtttgggg tccaggcagg ttttggggcc tcctgtctgg tgggaggagg      420
164      ccgcagcgca gcaccctgct cgtcacttgg gattgagacc ggctttccc      469
165      <210> SEQ ID NO 6
166      <211> LENGTH: 333
167      <212> TYPE: DNA
168      <213> ORGANISM: HUMAN
169      <220> FEATURE:
170      <221> NAME/KEY: promoter
171      <222> LOCATION: (1)...(333)
172      <221> NAME/KEY: mutation
173      <222> LOCATION: (318)...(318)
174      <400> SEQUENCE: 6
175      aagccccgcc gcctcccagg ctggaatccc tcgacacttg gtccttcccc ccccgccctt      60
176      ccgtgccctg cccttccctg cccttccccg ccctgccccg cccggccccg cccggccctg      120
177      cccaaccctg ccccgccctg ccccgccag ccggccacct cttaaccgag atcctccagt      180
178      gcacttgcca gttgttccgg acacatagaa agataacgac gggaagacgg ggccccgttt      240
179      ggggtccagg caggttttgg ggctcctgt ctggtgggag gaggccgag cgcagacccc      300
180      tgctcgtcac ttgggattga gaccggcttt ccc      333
181      <210> SEQ ID NO 7
182      <211> LENGTH: 303
183      <212> TYPE: DNA
184      <213> ORGANISM: HUMAN
185      <220> FEATURE:
186      <221> NAME/KEY: promoter
187      <222> LOCATION: (1)...(303)
188      <221> NAME/KEY: mutation
189      <222> LOCATION: (288)...(288)
190      <400> SEQUENCE: 7
191      tcgacacttg gtccttcccc ccccgccctt ccgtgccctg cccttccctg cccttccccg      60
192      ccctgccccg cccggccccg cccggccctg cccaaccctg ccccgccctg ccccgccag      120
193      ccggccacct cttaaccgag atcctccagt gcacttgcca gttgttccgg acacatagaa      180
194      agataacgac gggaagacgg ggccccgttt ggggtccagg caggttttgg ggctcctgt      240

```

PAGE: 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/292,723

DATE: 04/28/1999

TIME: 09:47:10

Input Set: I292723.RAW

```

195      ctggtgggag gaggccgcag cgcagcaccg tgctcgtcac ttgggattga gaccggcttt      300
196      ccc                                                                    303
197      <210> SEQ ID NO 8
198      <211> LENGTH: 263
199      <212> TYPE: DNA
200      <213> ORGANISM: HUMAN
201      <220> FEATURE:
202      <221> NAME/KEY: promoter
203      <222> LOCATION: (1)...(263)
204      <221> NAME/KEY: mutation
205      <222> LOCATION: (248)...(248)
206      <400> SEQUENCE: 8
207      cccttccttg cccttccccg ccttgccccg cccggccccg cccggccctg cccaaccctg      60
208      ccccgccctg ccccgcccag cgggccacct cttaaccgag atcctccagt gcacttgcca      120
209      gttgttccgg acacatagaa agataacgac gggaagacgg ggccccgttt ggggtccagg      180
210      caggttttgg ggctcctgt ctggtgggag gaggccgcag cgcagcaccg tgctcgtcac      240
211      ttgggattga gaccggcttt ccc                                                                    263
212      <210> SEQ ID NO 9
213      <211> LENGTH: 255
214      <212> TYPE: DNA
215      <213> ORGANISM: HUMAN
216      <220> FEATURE:
217      <221> NAME/KEY: promoter
218      <222> LOCATION: (1)...(255)
219      <221> NAME/KEY: mutation
220      <222> LOCATION: (240)...(240)
221      <400> SEQUENCE: 9
222      tgcccttccc cgccctgccc cgccccggccc ggccccggccc tgcccaaccc tgccccgccc      60
223      tgccccgccc agccggccac ctcttaaccg cgatcctcca gtgcacttgc cagttgttcc      120
224      ggacacatag aaagataacg acgggaagac ggggccccgt ttgggggtcca ggcaggtttt      180
225      ggggcctcct gtctggtggg aggaggccgc agcgcagcac cctgctcgtc acttgggatt      240
226      gagaccggct tcccc                                                                    255
227      <210> SEQ ID NO 10
228      <211> LENGTH: 209
229      <212> TYPE: DNA
230      <213> ORGANISM: HUMAN
231      <220> FEATURE:
232      <221> NAME/KEY: promoter
233      <222> LOCATION: (1)...(209)
234      <400> SEQUENCE: 10
235      aagccccggc gcctcccagg ctggaatccc tcgacacttg gtccttcccc ccccgccctt      60
236      ccgtgccctg cccttccctg cccttccccg ccttgccccg cccggccccg cccggccctg      120
237      cccaaccctg ccccgccctg ccccgcccag cgggccacct cttaaccgag atcctccagt      180
238      gcacttgcca gttgttccgg acacataga                                                                    209
239      <210> SEQ ID NO 11
240      <211> LENGTH: 202
241      <212> TYPE: DNA
242      <213> ORGANISM: HUMAN
243      <220> FEATURE:
244      <221> NAME/KEY: promoter

```

Please Note:
 Use T and/or Xaa have been detected in the Sequence Listing. Please review the
 Sequence Listing to ensure that a corresponding explanation is presented in the <220> to
 <223> fields of each sequence which presents at least one T and/or Xaa.

PAGE: 6

VERIFICATION SUMMARY
PATENT APPLICATION US/09/292,723

DATE: 04/28/1999
TIME: 09:47:10

Input Set: I292723.RAW

Line	? Error/Warning	Original Text
299	W "N" or "Xaa" used: Feature required	ggccacgcgt cgactagtac gggnnngggnn gggnnng